Two Species of Phylloxera from California (Hemiptera; Aphidae).

By G. F. Ferris, Stanford University, California.

The western portion of the United States appears to be very poorly supplied with species of *Phylloxera.* Aside from the notorious pest of the vine there appear to be but two species known from California, Davidson having recorded *P. popularia* Pergande from poplars and *P. salicola* Pergande from willow. I am here describing an apparently new species from oak, perhaps the first to be recorded from oak west of Missouri, and am presenting some notes upon one of the other species.

Phylloxera stanfordiana n sp. (Text figs. B, D.)

In life. Occurring upon the twigs of the host, concealed beneath any chance covering, especially numerous under the twig-encircling egg masses of a moth, (possibly *Malacosoma disstria.*) Entirely destitute of any secretionary covering; of a light yellow color.

Apterous female. Length (flattened on slide) .75 mm. Shape somewhat pyriform. Dorsum entirely destitute of pores, bearing a few very minute spines, of which those on the head are borne upon slight prominences. Derm minutely roughened in the cephalic region, elsewhere quite smooth. Beak reaching somewhat beyond the posterior legs, five-segmented. Antennae with the third segment somewhat longer than the other two combined and rather prominently annulated; sensoria, if present at all, borne at the extreme tip of the third segment. Abdominal spiracles apparently lacking.

Type host and locality. From *Quercus douglasii,* on the campus of Stanford University, California; Sept. 10, 1918. Collected by the author. *Holotype* and paratypes in the Stanford collection.

Notes. This probably belongs to the group of *P. rileyi* and *P. querceti,* but the almost obsolete dorsal tubercles and the absence of a conspicuous sensorium on the third antennal segment separate it at once. Attention should be called to the apparent absence of abdominal spiracles. I find the same condition in specimens of what I take to be *P. rileyi* and in the species later to be discussed in this paper as *P. salicola.* In *P. vastatrix* the abdominal spiracles are certainly present.

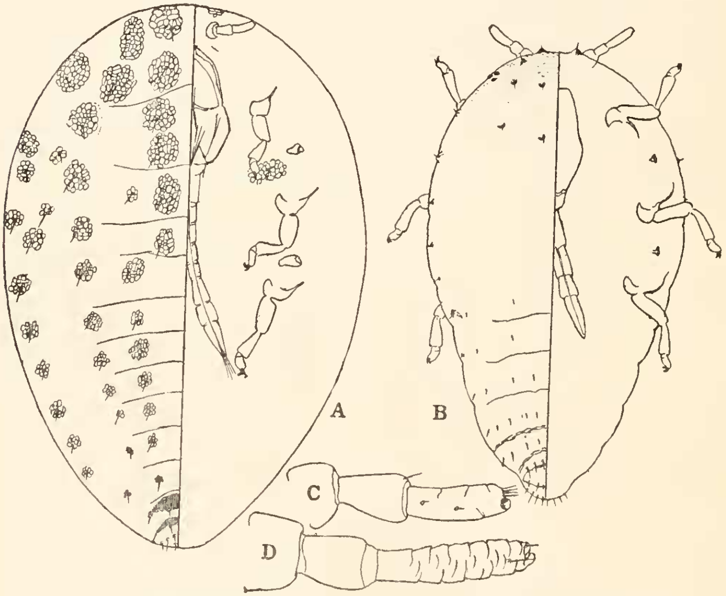
Phylloxera salicola Perg.? (Text figs. A, C.)

1904. *Phylloxera salicola* Pergande, Proc. Davenport Acad. Sci., Vol. 9, pp. 267-69, pl. XXI, figs. 161-168.

1015. *Phylloxera salicola* Perg.?; Davidson, Jn. Ec. Ent., Vol. 8, p. 419, pl. 25.

In life. Exposed upon the bark of the host, chiefly on the smaller twigs. Entirely covered with wooly, white secretion.

Apterous female. Length (flattened on slide) .9 mm. or less. Shape regularly oval, slightly more pointed posteriorly. Dorsum with numerous areas of pores, these arranged in three more or less definite, longitudinal rows. Each cluster of pores is grouped around a small spine, the clusters on the head being largest, the others becoming progressively smaller posteriorly. Derm otherwise smooth, not at all roughened or beset with fine points. Last two segments each with a small, transverse, chitinized area. Ventrally there is a small cluster of pores behind each of the first pair of spiracles. Antennae short, the third segment about as long as the other two combined, annulations few and



A, C.—*Phylloxera salicola* Pergande (?); apterous female and antenna of same. Specimen from *Populus trichocarpa*.

B, D.—*Phylloxera stanfordiana* n. sp.; apterous female and antenna of same. All figures drawn to same scale.

very faint, extreme tip apparently with a small sensorium. Beak reaching somewhat beyond the posterior legs, eight-segmented. Abdominal spiracles apparently lacking.

Hosts. From *Populus trichocarpa* and *Salix* sp., San Francisquito Creek, near Stanford University, California, and from *Populus candicans,* Salt Lake City, Utah, (R. W. Doane, coll.).

Notes. I am inclined to regard it as somewhat doubtful that this is really *P. salicola* Perg. The original description lacks definiteness in regard to the most important details and the figure is somewhat impressionistic but it is obvious that the species at hand is at least close to *salicola.* It certainly is not *P. popularia* Pergande as the latter is described and figured as having the dorsum thickly beset with minute points. The description and figures here presented, will, it is hoped, aid in clearing the matter up.

I am entirely unable to separate the specimens found on poplar from those found on willow, the only visible difference being that the abdominal groups of pores are perhaps a trifle larger in the specimens from the latter host. In the specimens from poplar in Utah, this difference is quite noticeable, the number of pores in all the groups being much reduced, some of those toward the posterior end of the abdomen being entirely lacking.

It may be noted that the above descriptions are based upon carefully stained material.

The Naiad of the Odonate Genus Coryphaeschna.

By Clarence Hamilton Kennedy, North Carolina State College, West Raleigh, North Carolina.

Recently while examining Mr. Brimley's collection of interesting southern Odonata the writer was shown among other immature specimens the largest aeshnine naiad* he had ever seen—a regular behemoth of a naiad. Mr. Brimley believed

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*See Comstock. Ann. Ent. Soc. Amer., 1918, vol. XI, pp. 222-224. I have adopted Prof. Comstock's term for the immature state of the Odonata. It is a most happy term for distinguishing the immature stages of the aquatic orders.